

- (e) a processor responsive to the sensor for adjusting at least one parameter of a treatment therapy provided to the therapy delivery element.

47. A lead system as claimed in claim 46, further comprising a signal generator and wherein the therapy delivery element is an electrode.

48. A lead system as claimed in claim 46, further comprising a pump and wherein the therapy delivery element is a catheter.

49. A lead system as claimed in claim 46, further comprising:

- (f) means for selectively altering the relative treatment therapy delivered through each of the therapy delivery elements.

50. A lead system for providing treatment therapy to a volume of neural tissue comprising in combination:

- (a) cannula having a lumen distal end, the lumen distal end having at least two openings, each opening capable of directing a lead outwardly along a distinct predetermined trajectory;
- (b) at least two leads insertable within the cannula;
- (c) at least one therapy delivery element at a distal end of at least one of the leads;
- (d) at least one sensor at a distal end of at least one of the lead; and
- (e) a processor responsive to the sensor for selectively altering a relative treatment therapy delivery delivered through the therapy delivery element.

51. A lead system as claimed in claim 50, further comprising a signal generator and wherein the therapy delivery element is an electrode.

52. A lead system as claimed in claim 50, further comprising a pump and wherein the therapy delivery element is a catheter.

53. A lead system as claimed in claim 50, further comprising:

- (f) means for selectively altering the relative treatment therapy delivered through each of the therapy delivery elements.

54. A method for providing treatment therapy to a volume of neural tissue comprising the steps of:

- (a) positioning a cannula within a predetermined treatment site within a patient, the cannula having at least one opening near a distal end capable of directing a lead outwardly along a predetermined non-colinear trajectory;
- (b) inserting at least two leads into the cannula, wherein at least one lead has at least one therapy delivery element on a lead end of the lead and at least one lead has a sensor on the lead end of the lead; and
- (c) directing the lead ends through at least one of the openings of the cannula and outwardly along the predetermined non-colinear trajectory;
- (d) positioning the therapy delivery elements in a non-linear configuration;
- (e) providing treatment therapy to the predetermined treatment site via the therapy delivery device
- (f) sensing with the sensor the extent of the treatment therapy being provided and generating a sensor signal; and
- (g) adjusting at least one parameter of the treatment therapy provided to the therapy delivery device in response to the sensor signal.

55. A method as claimed in claim 54, wherein the predetermined treatment is a volume of a brain.

56. A method as claimed in claim 55, wherein the predetermined treatment site is selected from the group consisting of subthalamic nucleus (STN), peduncular pontine nucleus (PPN), caudate, putamen, internal palladium, external palladium, cingulum, anterior limb of an internal capsule, anterior nucleus (AN), centremedian (CM), dorsal medial nucleus, a nucleus of a thalamus, hippocampus, a structure in a

temporal lobe, hypothalamus, a structure of a diencephalon, pons, medulla, cortex, cerebellum, lateral geniculate body, and medial geniculate body.

57. A method as claimed in claim 54, wherein the predetermined treatment site is a volume of a spinal cord parenchyma.

58. A method as claimed in claim 54, wherein the predetermined treatment site is a volume of a peripheral nerve.

59. A method as claimed in claim 54, wherein the therapy delivery element is an electrode.

60. A method as claimed in claim 59, further comprising the steps of:

- (h) establishing an anode/cathode relationship between at least two electrodes of the lead; and
- (i) presenting electrical pulses to the established anode/cathode relationships of the electrodes of the lead, whereby neural tissue are activated in the in the predetermined treatment site.

61. A method as claimed in claim 59, further comprising the steps of:

- (h) establishing an anode/cathode relationship between at least one electrode of the lead and the therapy delivery device; and
- (i) presenting electrical pulses to the established anode/cathode relationship.

62. A method as claimed in claim 54, wherein the therapy delivery element is a catheter.